

an extent as hydrogen by melted cast iron, its occlusion is almost entirely prevented by the presence of manganese. Gases are retained by pig iron after cooling, but can be extracted by heating the metal to 800°. Steel occludes less gas than cast iron, hydrogen predominating over carbonic oxide; on the other hand more carbonic oxide than hydrogen is occluded by soft iron. Finely divided iron free from gases decomposes water slowly at the ordinary temperature, rapidly at 100°, the decomposition being more rapid the finer the state of division of the iron.

NOTES

THE golden Baer medal was awarded this year, by the St. Petersburg Academy of Sciences, to Prof. Bunge, for his various works upon the flora of Russia. The Lomonosoff premium, value 1,000 roubles, was awarded to Prof. Beilstein, of Kazan, for researches on the properties of bodies of the benzoil series.

M. ANDRÉ, the astronomer who was sent by the French Institute to New Caledonia to observe the transit of Venus, has been appointed director of the new observatory established at Lyons by M. Waddington.

AT the half-yearly General Meeting of the Scottish Meteorological Society, held yesterday, the Duke of Richmond was elected President. The following papers were read:—1. On methods of estimating ozone and other constituents of the atmosphere, by Mr. E. M. Dixon, B.Sc., Office of Health, Glasgow. 2. On the peculiarities of the weather of December and January last, by Mr. Buchan, Secretary. 3. Observations of rainfall at sea on board ship, by Dr. Black, Surgeon-Major.

THE Report of the Treasury Meteorological Commission appointed in the autumn of 1875 has now been published. The chief recommendations are that ocean meteorology be transferred from the Meteorological Office to the Admiralty, that the annual Parliamentary Grant be increased from 10,000*l.* to 14,500*l.*, and that, in addition to the above, some pecuniary assistance, the amount not being specified, be given to the Scottish Meteorological Society, on whose claims to Government support the Commission was specially instructed to report.

WE recently announced (p. 116) that the city of Brunswick was making preparations to celebrate the 100th anniversary of the birth of Carl Friedrich Gauss, the "prince" of mathematicians, who was born in that city on April 30, 1777. It is proposed to erect a monument in Brunswick to Gauss, and from the circular which has been sent us we learn that the Monument Committee consists of the principal officials of the city, civil, professional, and commercial. No doubt many English men of science might wish to contribute to this monument; contributions should be addressed to the Gauss Monument Fund, Brunswick Bank.

WE can do no more this week than refer to the fact that the Oxford and Cambridge Universities Bill passed the second reading on Monday, as might have been expected, practically without opposition. The Bill does not differ essentially from those introduced last year in reference to the two Universities.

THE fourth Congress of Russian Archæologists will be opened on August 12, at Kazan. All communications should be addressed to Count Owaroff, at the Moscow Archæological Society.

WE are glad to hear that the founding of a Russian Anthropological Society at St. Petersburg may be considered as finally settled. Certainly many Russian scientific bodies have now special anthropological sections which, as for instance that of the Moscow Society of Friends of Natural Science, have done a good deal of valuable work, but it is also very desirable that the separate efforts of Russian anthropologists be more concentrated than they are at present.

THE Senatus Academicus of the University of St. Andrews have conferred the degree of LL.D. upon Dr. B. W. Richardson, F.R.S., and Dr. James Murie, F.L.S.

IN a small *brochure* recently published, Prof. Ragona, of the Royal Observatory of Modena, advocates the formation of an "Italian Meteorological Society." There are at present more than 100 meteorological stations throughout the peninsula, at various heights from the sea-level to 2,550 metres. Most are occupied also with magnetic observations; some are devoted almost exclusively to seismometry. The Minister of Agriculture, Industry, and Commerce publishes an *Italian Meteorological Bulletin*, and the Naval Minister sends out daily intimations of the state of the atmosphere throughout Europe, and of probabilities of weather. The proposed Society might hold an annual congress now in one city, now in another, and might, like the Austrian, receive a grant from Government.

DR. GABRIEL, of the University of Breslau, a well-known morphological investigator, has been sent by the Berlin Academy of Sciences to Naples to carry on for four months an extended series of observations on microscopic marine organisms. The necessary funds have been granted partly by the Academy and partly by the Prussian department of instruction.

THE Great Northern Railway Company have a bill now before Parliament for the construction of a line of railway from Shepreth to March, which will pass at a distance of not more than 1,700 feet from the Cambridge Observatory. From the experience of other observatories, and from the evidence of private letters, which Prof. Adams has received from several eminent astronomers, the Syndicate have strong reason to believe that the passage of trains, so near the Observatory, would very seriously affect the accuracy of the observations, or even cause their entire loss. The Syndicate therefore recommend, on good grounds, that the University should petition Parliament against the passing of the bill above referred to.

RUSSIA expended 345,000*l.* upon her seven universities during the past year.

OF the 13,356 new works issued in Germany during the past year, 848 were devoted to the natural sciences, 296 to geography and travel, and 190 to mathematics and astronomy.

It is proposed to open before long a good aquarium at St. Petersburg. The institution is patronised by the Society of Acclimatisation, which will have, in connection with the aquarium, a garden for scientific experiments relative to the acclimatisation of plants.

THE immense number of wolves in Russia, to which reference was made some time ago, seems not to have been overrated. An official report of the *Zemstvo* of the Kerensk district (Penza Government), just published, estimates the ravages of wolves during the years 1874 and 1875 at 270 horses, 200 cows, 822 foals, 707 calves, 1,812 sheep, about 1,000 pigs, 3,616 geese and ducks, and 253 dogs.

WE recently announced the death of the eminent American palæontologist, Mr. F. B. Meek. He died within the walls of the Smithsonian Institution, where he had been permitted to occupy rooms for about eighteen years. He had been connected with the U.S. Geological and Geographical Survey of the Territories for the greater portion of the time since its first organisation in 1867. Mr. Meek was born in the city of Madison, Ind., December 10, 1817. From his earliest recollection he was interested in the Silurian fossils so abundant in the rocks of the neighbourhood of his home. He had then never heard of geology, but studied them with admiration and wonder as to their origin. Against his own wishes he entered into business, but during the financial crisis of 1847 he failed,

and lost all his property. During the years 1848 and 1849 he was an assistant of Dr. D. D. Owen in the U.S. Geological Survey of Iowa, Wisconsin, and Minnesota, after which he returned to Owensboro, Ky. In 1852 he became the assistant of Prof. James Hall, the eminent palæontologist, of Albany, N.Y. He remained there until 1858, with the exception of three summers, two of which he spent in the Missouri State Geological Survey. In the summer of 1853 he was sent by Prof. Hall with Dr. Hayden as his associate, to explore the "Bad Lands" of Dakota, and brought back very valuable collections. This was the commencement of that long series of successful explorations of all portions of the west which have continued up to the present time. While at Albany he was constantly engaged in the most important palæontological works, the results of which were published in the proceedings of the American learned societies. In 1858 he went to Washington, where he resided until the time of his death, leaving the city only for a few months at a time, while engaged as palæontologist for the State of Illinois, Ohio, or in field explorations in the far west in connection with the U.S. Geological Survey under the direction of Prof. Hayden. His publications, apart from the State reports referred to, were very numerous, and bore the stamp of the most faithful and conscientious research. They are regarded all over the world as authority on the subjects of which they treat, and in very few cases have his conclusions ever been questioned. They may be found in the *Proceedings of the Academy of Natural Sciences*, Philadelphia, *American Journal of Science*, New Haven, *Albany Institute*, *Smithsonian Contributions*, and various and important reports in the publication of the U.S. Geological Survey for the Territories with which he was so long connected. He was so modest and retiring that he was scarcely known outside of a very limited circle of friends. He was a member of the National Academy of Sciences, and many other prominent scientific associations in America and in Europe. Prof. J. D. Dana, writing the day after his death, says: "American palæontology has lost, as regards the Invertebrate Department, half its working force at a blow. He has gone before his work was done. But what he had finished was enough for half-a-dozen ordinary men; a marvellous pile, if we view only the aggregate of volumes and memoirs, but far more marvellous when we look within at the amount of laboured descriptions and careful comparisons, and at the almost numberless illustrations, mostly from his own exact and beautiful drawings."

On Saturday, at the Society of Arts, Dr. Corfield, under the auspices of the Trades Guild of Learning, gives the next of the series of lectures on the Laws of Health. These lectures have been well attended and appreciated from the first. Prof. Huxley was chairman on the first occasion, Dean Stanley on the second, and at the lecture on February 10 Cardinal Manning presided. The Cardinal, after the lecture, heartily endorsed the statements of the lecturer; the lecture, he said, showed that the highest science came into the closest application in daily life. There are eight other lectures of the course.

THE educational and scientific institutions inaugurated by the Khedive of Egypt in his schemes of reform are among the first to feel the effects of the present chaotic condition of Egyptian finances. Not long since the free public schools of Cairo were all closed, and now the vice-regal Geographical Society is upon the point of dissolution. The Khedive had gathered together several men of talent and experience to form this Society, with the intention of instituting an active and energetic scheme of exploration in Central Africa. Their names and the bulletins which have appeared, gave every promise of early and valuable additions being made to the cause of African research. The long-continued withholding of financial support has, however, so entirely crippled its operations, that the Society has for some time practically ceased to exist.

THE last contribution of Karl von Baer, written ten days before his death, appears in the last number of the *Archiv für Anthropologie*, and discusses the subject of the source of the tin used by the ancients in their bronzes. The fact that the proportions of nine parts of copper to one of tin are noticeable in almost all antique bronze articles, would seem to indicate that its use spread from a single centre. Taking a hint from Strabo's statement that tin was found among the Drangians, he caused inquiries to be set on foot by Russian Government officials in Khorassan, who reported that there are extensive deposits of tin there, as well as of other metals, which are mixed in a primitive manner. These v. Baer regards as the sources of the numerous bronzes found in the ruins of Babylon and Assyria, but did not think it probable that they supplied the tin required by Scandinavia and the countries surrounding the Mediterranean before the discovery of the Cornish mines. The latter was probably brought by Phœnicians from Banca, although no mention of such journeys is extant.

In the February session of the Berlin Anthropological Society Prof. Virchow gave the results of a number of craniological measurements undertaken in Bulgaria. The general type is evidently not Slavonic but Finnish, and would seem to point to a distant emigration from among the Turco-finnish tribes of the Ural, to the region of the Danube. Two distinct subordinate types were noticed, one brachycephalic—pure Finnish; and the other macrocephalic, with retreating forehead, strikingly similar to that of the Australian negro. The Bulgarians gradually adopted the Slavonic language, and no trace of their original language, not even a manuscript, remains. Dr. Friedel exhibited at the same Session a large collection of stone hatchets lately found near Köpenick, in company with some peculiarly fashioned stone instruments, evidently used to prepare the hatchets, and possessing the same hardness as ordinary grindstones.

A TELEGRAM from Algiers announces that on the 16th inst. Lieut. Say and others left Ouarghe with twenty-four men and fifty camels, intending to explore the Sahara, and establish commercial connections with Algerian producers.

M. KRANTZ, the Director-general of the Universal Exhibition of 1878 proposes to hold an international piscicultural exhibition. All who desire to exhibit must intimate their intention to the Secretary before May 1, 1877. The administration does not undertake to procure sea water.

M. QUATREFAGES has just published, through Baillière, a work on anthropology. He attacks the evolution theory.

MRS. FRANCES ELIZABETH HOGGAN, M.D. of Zurich, who has been for several years in practice in London, has just passed a successful examination in Dublin, and has received the Licences in Medicine and Midwifery of the King's and Queen's College of Physicians in Ireland, which of course secure for her official recognition in the United Kingdom. A paper by Doctors George and Mrs. Hoggan was recently read at the Royal Society, on "Lymphatics of Muscles."

M. WADDINGTON intends to propose to the French parliament the establishment in four large provincial towns of universities according to the English system. The faculties at present in existence in a number of towns will not be suppressed, but they will be necessarily to some extent cast into the shade. A sharp discussion is anticipated in Parliament, many large towns competing for selection as the seats of these new universities.

THE third annual meeting of the Scientific Club was held at the Club House, Savile Row, on Thursday, the 15th inst., Major F. Duncan, R.A., D.C.L., &c., Chairman of the Committee, in the chair. The report for 1876, which showed the rapid progress

made by the Club during the year, was unanimously adopted. The number of members, which is now over 600, is to be limited for the present to 700. Committee-men and auditors for 1877 were elected, and cordial votes of thanks to the Chairman, Committee, Auditors, and Secretary, concluded the meeting.

At the annual meeting of the shareholders of the Brighton Aquarium, Mr. Arthur Wm. Waters stated his belief that if arrangements were made so that a naturalist could go to Brighton and have a table in a quiet room with the most necessary apparatus and chemicals for his study, animals kept living, and fresh ones brought him as required by the sailors under the instruction of the scientific staff, there are many who would gladly avail themselves of the opportunity. The difficulties of a naturalist at present who may go down to the sea-side for a short time to undertake elaborate physiological studies are very great, and he thinks that many, including science students from the universities, would be willing to pay for the advantages which might thus be afforded. Mr. Francis Francis, who has just been appointed naturalist director, said that it was intended to do this; and even to hear of the intention will be a source of satisfaction to those who desire the present aquaria to be made more useful. We hope that if the directors have any suitable place they will not delay to utilise it, and that it may turn out to be a source of permanent advantage, for scientific research will continue when rinking and other such amusements have been replaced by more novel attractions.

THE most important paper in the February number of Petermann's *Mittheilungen* is a detailed discussion of the projects for a railway to Central Africa from the Mediterranean Coast, by Dr. G. Rohlfs. Dr. Rohlfs discusses the various schemes which have been proposed, speaks very unfavourably of that which would carry a line from Algeria southwards, and advocates strongly a line from the coast of Tripoli, especially from Braiga at the head of the Gulf of Sidra, to Lake Chad. He analyses all the difficulties and advantages of this route, and thus introduces much information on the region between these two points, as well as on the whole Saharan region. He proposes, as the only feasible plan, that the undertaking should be an international one.

In the same number Dr. Behm continues his monthly summary of geographical news. He refers to a work by A. Kirichenbauer, "Die Irrfahrt des Odysseus als eine Umschiffung Afrika's erklärt" (Berlin, Calvary), in which the author, by the application of astronomy and mathematical geography, endeavours to show that the Kernel of the Odyssey is a tradition belonging to the fifteenth century B.C., of a circumnavigation of Africa from the Red Sea to the Mediterranean. The Lotophagi were South Arabians, Polyphemus was a Galla, whose cave was at Cape Guardafui, Circe ruled in Rodriguez, the Cimmerians dwelt in some South Polar land, and the Straits of Gibraltar were Scylla and Charybdis. Thus Ulysses was both the first African and first Polar explorer of whom we have any record. Dr. Behm states that the author discusses the subject with the greatest seriousness and acuteness.

THE December *Bulletin* of the French Geographical Society contains papers by Mr. J. B. Paquier, "On Russian and English Explorations in Central Asia;" by M. A. V. Parisot, "On the Region between Ouargla and El Golêa;" by Abbé Durand, "On Portuguese India;" and by Abbé Desgodins, "On the Territory of Batang." A letter from Dr. Emil Bessels, of the *Polaris* Expedition, accompanies a map exhibiting approximately the lines of equal tides in the North Atlantic, North Pacific, and Arctic Oceans, for the purpose of showing from what direction the tidal wave is propagated towards Polaris Bay.

L'Exploration for February 7 contains an interesting paper by M. Henry Bionne on the Colonial régime of France.

CAPT. HOWGATE's scheme of Polar exploration by means of a colony placed at Discovery Bay, to which we referred in a recent number, has been referred by the United States Congress to the Committee on Naval Affairs. It has received the support of the principal United States scientific societies, and already there have been many suitable volunteers. We should not be surprised, therefore, to hear that the grant has been made, and if men can be found suitable and willing to form such a colony, the experiment seems worth trying.

A SENSATION has been created in the geographical circles of Paris by the opinion expressed by Dr. Pogge at the Geographical Society of Berlin, that the Lualaba was flowing in the Ogovai. The Ogovai delta is part of the French Gaboon settlement. MM. Brazza, Marche, and others are engaged in exploring the river, which they have heard from natives flows out of a large lacustrine basin. It is feared the explorers cannot reach the end of their journey without receiving fresh reinforcements from home.

THE Geographical Society of Geneva voted at its last meeting its adhesion to the resolutions of the conference, for the exploration of Central Africa. A special Swiss committee, to form part of the Association, is to be appointed before long at Geneva.

M. BONNAT, the French African explorer, who has been up the Volta (Ashanti) as far as Salaga, states that from that place much-frequented routes strike off to Timbuctoo in the west, and Lake Tchad in the east, and that from these places trade caravans are constantly passing to and from Mexico and Tripoli. He bought European goods at Salaga, which entered Africa by the Mediterranean. M. Bonnat is organising a large expedition for the thorough exploration of the region from which he has just returned.

WE are glad to notice that science was well represented at the preliminary meeting last Saturday to make arrangements for the celebration of the 400th anniversary of the introduction of printing into England by Caxton. Science owes much to this art, and in recent years has to some extent repaid her debt by the vast improvements which have been introduced, based on the principles she has discovered.

FATHER SECCHI has compiled a very useful list of 444 coloured stars, which is published in the *Memorie della Società degli Spettroscopisti Italiani*. Many of them appear to be taken from Schiellerup's catalogues, from Lalande and Sir J. Herschel; to these have been added Mr. Birmingham's newly-discovered coloured stars. A note is added to each star, showing the colour and type of spectrum. The number of the star in Chambers's catalogue is given, when mentioned there, and the R.A. and Declination is given for the year 1870. We note that by far the greater number of stars are red, and the spectra of the third and fourth types prevail. This catalogue will prove useful, first, in detecting the variability of the stars, and secondly, the change of spectrum when variable. The following are representative stars of the types to which they belong:—1. Sirius, α Lyra, white stars; 2. Capella, Pollux, yellow stars; 3. α Orionis, β Pegasi, α Herculis, red-yellow stars; 4. Small blood-red stars.

WE notice in the fifteenth volume of the *Globe*, published by the Geographical Society of Geneva, a very interesting report by M. H. D. Saussure on the present state of cartography in Switzerland. The author not only gives a detailed report on the numerous Swiss cartographical works which were so much praised at the Paris Geographical Exhibition, but also sketches the history of cartography in his country, and skillfully discusses the relative values of different modes of representing on a map the various characters of land, and of dressing maps for various special purposes.

SOME fifty years ago Ampère stated his belief in the existence of molecular electric currents permanently flowing in bodies, and he applied this hypothesis to the explanation of the reciprocal action between movable conductors through which galvanic currents are passing and permanent magnets. According to Ampère a permanent magnet contains, in proportion to its strength, a larger or smaller number of molecular currents of the same direction, each of which behaves like a small molecular magnet. In pursuance of this theory, Herr Zoellner has lately made a series of investigations and has recorded the results of his experiments in a paper read before the Royal Saxon Society of Sciences at Leipzig during the past year. With regard to the constitution of material molecules Herr Zoellner expresses his opinion "that each material molecule of a body consists of a conglomeration of (Ampère's) molecular currents of any direction, with a certain quantity of freely movable electric particles, which, under the influence of electrostatic or electrodynamic induction forces, execute such motions or groupings as are determined by Weber's law of electric reciprocal action." It is but fair to state that Weber's views on this subject were identical, and he stated them as early as in 1851 in his explanation of diamagnetism. Zoellner makes a whole series of deductions from this theory, all of which agree with observed phenomena and laws found in various domains of physical science.

THE Rev. T. R. R. Stebbing sends us an interesting letter on the true origin and correct pronunciation of the name *Antedon*, which we regret we have not space to print in full. As the result of careful inquiry, Mr. Stebbing concludes that the name is undoubtedly feminine, that the middle syllable should be pronounced long, and that the aspirate which de Fréminville dropped ought to be restored to the spelling. "If, then, we were to adopt the compromise suggested in Mr. Herbert Carpenter's important letter (vol. xv. p. 197), we should have to write, instead of either *Comatula rosacea* or *Antedon rosaceus*, the trinomial, *Comatula (anthenon) rosacea*. To sanction such an innovation as Mr. Carpenter proposes, no doubt some general agreement would be required, and the same general agreement might be usefully employed in sanctioning a statute of limitations against the revival of obsolete names, and to insure the publication of new scientific names in one or other of a very limited number of chronicles. Some international science congress of the future may perhaps achieve the requisite legislation."

THE *Journal* of the Society of Arts for February 16 contains a useful paper by Dr. R. J. Mann, on "Recent Explorations of the Lake Systems of Central Africa."

WE notice an important German work, by the Bernese Professor, Dr. Emmert, on the diseases of the eye, occasioned by various professions, and especially by the vicious arrangements in schools. An inquiry made by the learned Professor in the cantons of Berne, Solothurn, and Neuchâtel proves that an increasing myopia is the fate of all scholars, and that at the age of twenty years there are very few of them who are not afflicted with this disease. Various hints by the author as to improved arrangements to be adopted in schools deserve the attention of school boards.

A RECENT subscriber will find an account of Siemens' Bathometer in NATURE, March 30, 1876 (vol. xiii. p. 431).

THE additions to the Zoological Society's Gardens during the past week include two Pennant's Parrakeets (*Platyercus pennanti*) from New South Wales, presented by Mr. E. Sargent; an Anaconda (*Eunectes murinus*), a Crested Curassow (*Crax allector*), and two Green-billed Curassows (*C. viridirostris*) from South America; two Feline Dourocoulis (*Nyctipithecus felinus*) from South Brazil; two Cariamids (*Cariama cristata*), from South America, purchased.

SOCIETIES AND ACADEMIES

LONDON

Royal Astronomical Society, February 9.—Annual general meeting.—William Huggins, D.C.L., president, in the chair. The following gentlemen—A. Mason Worthington, B.A., John Sidney White, and George Francis Hardy, were elected fellows of the Society. The annual report of the society showed that the number of Fellows had been increased during the past year, and that the society's library had been enriched by several important presents of books and manuscripts. Ten minor planets have been discovered in the course of last year, six of them in America, and four in France. In solar physics Prof. Tacchini has made an interesting investigation as to the relative height of solar prominences at different times of the sun-spot period. Prof. Young has determined the rate of the solar rotation by means of the displacement of the dark lines in the spectrum of the sun's limb. He has also proved that the 1474 line is double, and that the two components are of unequal strength; the coronal line corresponds to the stronger of the two, whilst the other is one of the faint lines in the spectrum of iron. Mr. Huggins' photographs of the spectra of stars were also referred to, and a short account was given of the observations of the new star in Cygnus, which was discovered by Dr. Schmidt, at Athens, on November 24, 1876. Its spectrum gives several bright lines, amongst which are three of the hydrogen lines, C being the brightest of all, the sodium line D, or the chromosphere line near D, the magnesium lines δ , and the coronal line 1474. The reduction of the observations of the transit of Venus has been proceeding continuously at the Greenwich Observatory, under the direction of Capt. Tupman. All the observations with transit instruments at the various stations for local time and longitudes of Honolulu and Rodriguez by the observations of the moon in zenith distance have been completely reduced. An idea of the magnitude of the undertaking may be formed when it is stated that these two last calculations required the use of three millions of figures. The Report having been adopted, the Society proceeded to the election of Officers for the ensuing year, and the following gentlemen were elected: As President, William Huggins, F.R.S. As Vice-Presidents: J. C. Adams, F.R.S., Lowndean Professor of Astronomy, Cambridge; Sir G. B. Airy, K.C.B., F.R.S., Astronomer Royal; Arthur Cayley, F.R.S., Sadlerian Professor of Geometry, Cambridge; Edwin Dunkin, F.R.S. As Treasurer, Samuel Charles Whitbread, F.R.S. As Secretaries: J. W. Lee Glaisher, F.R.S.; A. Cowper Ranyard, M.A. As Foreign Secretary, Lord Lindsay, M.P. As Council: John Brett, Esq.; W. H. M. Christie, M.A. Warren De La Rue, F.R.S.; J. R. Hind, F.R.S., Superintendent of the *Nautical Almanac*; E. B. Knobel; George Knott; William Lassell, F.R.S.; E. Neison; Capt. Wm. Noble; Rev. S. J. Perry, F.R.S.; Earl of Rosse, F.R.S.; Capt. G. L. Tupman, R.M.A.

Geological Society, January 24.—Prof. P. Martin Duncan, M.B., F.R.S., president, in the chair.—George Barrow, William Heerlein Lindley, and Joseph Samuel Martin, were elected Fellows of the Society.—The following communications were read:—Note on the question of the glacial or volcanic origin of the Talchir boulder-bed of India and the Karoo boulder-bed of South Africa, by H. F. Blanford, F.G.S. The author, referring to a doubt expressed by the President in a paper on Australian tertiary corals as to the glacial origin of the Talchir boulder-bed, indicated that the hypothesis of its formation by the action of local glaciers under present climatal conditions would require the elevation of the whole region to the extent of 14,000 or 15,000 feet, and the assumption that the denudation of this great mountain mass was so moderate that large tracts of the ancient surface are still preserved at levels now only a few hundred feet above the sea. This the author regarded as very improbable. He assumed that the President, rejecting the evidence adduced by various writers in favour of the glacial origin of the Talchir and Karoo boulder-beds, was inclined to fall back upon the notion of their being of volcanic origin, and quoted a letter from Mr. King, who had described the Talchir rocks of Kámáram as trappean, in which that gentleman stated that the rocks so interpreted by him prove to be dark green and brownish mudstone. He cited further evidence of like nature, and concluded that the ascription of a volcanic origin to these boulder-beds was probably in all cases due to similar misinterpretations.—On British cretaceous patelloid gasteropoda, by John Starkie Gardner, F.G.S. In this